

ABSTRACT OF THE DISCLOSURE

Electric power is generated downhole by changes in annulus pressure. In

5 a described embodiment, a system for generating electric power includes a piston, an accumulator, a reservoir of hydraulic fluid, a turbine, and a generator. A change in annulus pressure causes displacement of the piston due to a pressure differential between the annulus and the accumulator. Piston displacement causes the hydraulic fluid to flow through the turbine, thereby driving the
10 generator to generate electricity.